Discussion on Lectures by V. A. Chuyenkov, Yu. I. Gorkun, 48-22-4-5/24
and K. G. Tolpygo

the dielectric strength of the ionic dielectric is only then disturbed, if at least half the number $2N_i$ (N_i denoting the number of ionizations per unit time) of the electrons (inizating plus knock out electrons), which appear in the domain $0 \leqslant \varepsilon \leqslant I$ because of ionization, is accelerated by the field and again obtains its ability to ionize. Because of the fact, as is shown by computations, that the majority of electrons passes into the domain of zonal states after ionization in the strong electric field, the "polaron stage" of the electron acceleration plays no role in the disturbance of the dielectric strength. Actually, everything here is dependent on the behaviour of just those electrons, which are formed in the domain $\varepsilon \leqslant I$ because of ionization. Regarding the application criterion of perturbation theory, it was applied in the respective case. Computations show, that the electron wave length with the energy of 1 - 2 eV is less than its mean free path.

AVAILABLE: Library of Congress

1. Crystals--Theory 2. Magnetic fields---Applications

Card 3/3

CHUYENKOV, V. A.

AUTHORS: Chuyenkov, V. A., Astafurov, A. V., Konorova, 48-22-4-18/24
Ye. A., Koritskiy, Yu. V., Odoyevskiy, V. A.

TITLE: Discussion on the Lectures Held by G. A. Andreyev; A. V. Astafurov; K. K. Sonchik; I. Ye. Balygin (Prenlya po dokladam: G. A. Andreyeva; A.V. Astafurova; K.K. Sonchika; I.Ye. Balygina)

PERIODICAL: Izvestiya Akademii Nauk SSSR, Seriya Fizicheskaya, 1958, Vol. 22, Nr 4, pp. 438-438 (USSR)

ABSTRACT: V. A. Chuyenkov maintains, that the experiments by Krasin, which were conducted at Tomsk show the opposite of the assertions by Balygin. For this reason the problem cannot be considered solved. The experiments by Astafurov proved to be interesting. A. B. Astafurov critizes the lecture by Balygin. He maintains, that the fact of a double or treble breakdown of the liquid under a single pulse seems somewhat peculiar; in particular, as these subsequent breakdowns occur at a reduction of voltage. It is possible, that this phenomenon is due to the insufficiencies of the circuits. As the author performed no degassing of the liquid, the values of the breakdown voltage obtained by him are obviously too low. The physical process recorded on the oscillographs is dis-

Card 1/3

torted because of gas inclusions. Ye. A. Konorova states, that the experimental results obtained by Andreyev do not contradict the results obtained by her. Astafurov overlooked a fault in his work, consisting of an insufficient contact of the electrode and the ice. Yu. V. Koritskiy remarked, concerning the lecture by Andreyev, that it is inevitably necessary to take into account the dependence of dielectric strength upon the duration of the voltage application (exposure) in the examination of the rules governing electric breakdown. This was not done by the author. Another contradiction appears in the lecture, consisting of the fact, that the factor influencing the magnitude of the current previous to disruption has no influence on the dielectric strength in thermal breakdown. The lecturer said with respect to the lecture by Balygin, that it was a great drawback of the work not to purify sufficiently the samples of the investigated liquids. V. A. Odoyevskiy criticizes the work by A. A. Vorob'yev and his coworkers and is of opinion, that they dealt with the same subject in several variations, without analyzing the physics

Discussion on the Lectures Held by G. A. Andreyev; A. V. Astafurov; K. K. Sonchik; I. Ye. Balygin 48-22-4-18/24

of the mechanism. Their assertions have been refuted for a long time.

AVAILABLE: Library of Congress

1. Scientific reports--Critic

Card 3/3

AUTHOR: Chuyenkov, V. A.

57-28-3-5/33

TITLE: On the Behavior of Germanium - Type Valence Semiconductors in a Strong Electric Field (K povedeniyu valentnykh poluprovodnikov tipa germaniya v sil'nom elektricheskom pole)

PERIODICAL: Zhurnal Tekhnicheskoy Fiziki, 1958, Vol. 28, Nr 3, pp.470-479 (USSR)

ABSTRACT: The attempt is made here to explain the experimental data in relation to the behavior of the electron mobility in valence semi-conductors of the germanium - type in a strong electric field. Only electron semiconductors are investigated. Such electric field strengths E are investigated in the case of which the electron concentration in the semiconductor remains constant. On this condition the function of distribution of conduction - electrons with respect to energies and angles (it is assumed that the electron in the crystal is a free particle with a scalar effective mass m*) (the electric field being orientated along the z-axis) of the equation

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On the Behavior of Germanium - Type Valence Semiconductors in a Strong Electric Field

$eE \frac{\partial f}{\partial p_z} = f_c(\mathcal{E}, \theta)$ is sufficient, in the case of which $f(\mathcal{E}, \theta)$ denotes the electron distribution function, e - the electron charge, p_z - the z-component of the momentum of the electron, $\mathcal{E}$ - the energy of the electron and θ the angle between the orientation of the electric field and the orientation of the electro momentum, $f_c(\mathcal{E}, \theta)$ denotes the change of the distribution function per unit time due to electron scattering on the lattice vibrations (the scattering on admixtures is not taken into consideration). In order to be able to describe $f_c(\mathcal{E}, \theta)$ explicitly the formula for the probability of an electron scattering of the heat vibrations of the lattice must be known. It is demonstrated that the scattering of the longitudinal oscillations (the optic as well as the acoustic) of the lattice plays the basic part. It is shown that in the case of $E < E_1$ the electron mobility does not depend on the field, in the case of $E_1 < E < E_2$ that quantity is inversely proportional to the square root of E, and finally that in the case of $E > E_2$ the mobility is inversely proportional to the field. E_1 represents a certain value at which the formula (22) transforms into formula (25).

On the Behavior of Germanium - Type Valence Semiconductors in a Strong Electric Field

E_2 is a certain value at which formula (25) transforms into formula (33). Such a dependence of the electron mobility on the electric field strength was observed in Reference 5 (in the course of experiments). It is shown (according to the formulae(22) , (25), (33) and on the Tables 1 and 2) that this theory represents with satisfying accuracy the dependence of electron mobility in the germanium - type valence semiconductors on the electric field strength, as well as the temperature dependence of E_1, E_2 and v_{drift} (drift-velocity of the electrons) assuming that the electron possesses a certain scalar effective mass m* (the value of which is an intermediate value between the longitudinal mass $m_1 = 1{,}3\ m_0$ and the transversal mass $m_2 = 0{,}08\ m_0$) (Reference 8) and that the probability of the scattering of electrons on the optic lattice vibrations is expressed by the formulae (2) and (3). It is pointed to the fact that formula (38) used in Reference (1) for the probability of the electron scattering of the optic lattice vibrations

On the Behavior of Germanium - Type Valence Semiconductors in a Strong Electric Field

(which differ from (2) and (3)) cannot explain a number of experimental results. There are 2 tables, and 9 references, 3 of which are Soviet.

ASSOCIATION: Fizicheskiy institut im. P. N. Lebedeva AN SSSR Moskva (Moscow Institute for Physics imeni P. N. Lebedev AS USSR)

SUBMITTED: July 6, 1957

1. Semiconductors--Electrical factors 2. Germanium--Properties 3. Germanium--Electron transitions 4. Mathematics

Chuyenkov, V.A.

S/181/60/002/05/03/041
B008/B058

AUTHOR: Chuyenkov, V. A.

TITLE: Electrical Conductivity of Valence Semiconductors at Low Temperatures in Strong Electric Fields

PERIODICAL: Fizika tverdogo tela, 1960, Vol. 2, No. 5, pp. 799-809

TEXT: The dependence of the mean probability of impact ionization, the mean probability of recombination, and also the concentration of electrons (holes) and the current density in valence semiconductors at low temperatures on the electric field vector was investigated. A criterion for the occurrence of an electric breakdown in valence semiconductors at low temperatures was obtained. An attempt is made in the paper under review to deal with the given problem from a more general point of view by means of the solution of the kinetic equation (4). n-type germanium serves as an example of application for the formulas obtained, with $I \simeq 0.01$ ev $< \hbar\omega_o \simeq 0.037$ ev, and the scattering of carriers by optical oscillations being therefore of no special importance. The author finally thanks B. M. Vul and

Card 1/2

B

Electrical Conductivity of Valence Semiconductors at Low Temperatures in Strong Electric Fields

S/181/60/002/05/03/041
B008/B058

E. I. Abaulina-Zavaritskaya for their interest in the paper and their valuable discussion. There are 11 references: 7 Soviet and 4 English.

ASSOCIATION: Fizicheskiy institut im. P. N. Lebedeva AN SSSR, Moskva (Physics Institute imeni P. N. Lebedev AS USSR Moscow)

SUBMITTED: September 30, 1959

√B

Card 2/2

CHUYENKOV, V.A.

Electrical conductivity of valency semiconductors at low temperatures in strong electric fields. Fiz. tver. tela 2 no.5:799-809 My '60. (MIRA 13:10)

1. Fizicheskiy institut im. P.N.Lebedeva AN SSSR, Moskva.
(Semiconductors--Electric properties)
(Electric fields)

CHUYENKOV, V.A.; CHEN' KE-MIN [Ch'ên K'o-ming]

Generalizing the criterion of semiconductor breakdown in a constant electric field. Fiz. tver. tela 3 no.9:2794-2803 S '61. (MIRA 14:9)

1. Fizicheskiy institut imeni P.N. Lebedeva AN SSSR, Moskva.
(Semiconductors--Electric properties)

24.7807

43112
S/181/62/004/011/007/049
B102/B104

AUTHORS: Chuyenkov, V. A., and Ch'en K'o-ming

TITLE: The process of a semiconductor breakdown with respect to time

PERIODICAL: Fizika tverdogo tela, v. 4, no. 11, 1962, 3054 - 3064

TEXT: A semiconductor plate is considered under application of a pulsed electric field and the conditions and process of a breakdown are studied theoretically, with due consideration of both thermal and impact ionization as well as of the Joule effect. It is assumed that during the breakdown the field distribution within the semiconductor undergoes no substantial change. Lengthy calculation leads to the following relations for the duration of the thermal and electric breakdown being derived from the solution to a system of equations describing the current density distributions for electrons and holes:

$$t_{пр.} \approx \frac{\left(\beta + \frac{u}{2h}\right) c\rho k T_0^2}{e_0 (u_n + u_p) W g \dot{E}_e} e^{\frac{W}{kT_0}} \qquad (36)$$

$$t_{пр.} = \left[\frac{2c\rho k T_0^2}{e_0 (u_n + u_p) W g \dot{E}_e}\right]^{1/2} e^{\frac{W}{2kT_0}} \text{ при } \xi_0^2 = \frac{1}{8}\left(\frac{\tau_0^*}{t_{эфф.}}\right)^2 = 1, \qquad (39)$$

Card 1/3

The process of a ...

$$t_{пр.} \approx \pi \left[\frac{2cpkT_0^2}{2e_0(u_n + u_p) W_g \mathcal{E}_c} \right]^{1/2} e^{\frac{W}{2kT_0}} \text{ при } \xi_0^2 \ll 1, \qquad (40)$$

$$t_{пр.} \approx \frac{2cpkT_0^2}{e_0(u_n + u_p) W g \tau_0^* \mathcal{E}_c} e^{\frac{W}{kT_0}} \ln \left[\frac{1}{2} \left(\frac{\tau_0^*}{t_{эфф}} \right)^2 \right] \text{ при } \xi_0^2 \gg 1, \qquad (41)$$

$$\tau_{пр.} = \frac{1}{A-B} \ln \frac{j(\tau_{пр.})}{j(0)}. \qquad (44)$$

$$\left(\beta + \frac{u}{2h}\right) t_{пр.} \approx \left(\frac{\alpha}{\beta + \frac{u}{2h}} - 1 \right)^{-1} \ln \frac{j(\tau_{пр.})}{j(0)} \approx 10 \left(\frac{\alpha}{\beta + \frac{u}{2h}} - 1 \right)^{-1}. \qquad (46)$$

Definitions:

$$A \approx D = \alpha t_{эфф.}, \quad B \approx F = \left(\beta + \frac{u}{2h}\right) t_{эфф.}, \qquad (24),$$

j - total current (n+p), $\alpha(E,T)$ mean probability of impact ionization, $\beta(E,T)$ mean recombination probability, u(ET)-drift rate, 2h- plate thickness, ρ -density, c - specific heat, W-energy necessary for thermal ionization, $g \cdot \exp(-W/kT)$ - number of electrons produced per sec. in thermal ionization, $\mathcal{E}_c$ -mean critical field strength;

$$\tau_0^* = \tau_0 \frac{u_n\left(\frac{E}{2}\right) + u_p\left(\frac{E}{2}\right)}{u_n(E) + u_p(E)}, \qquad \text{(part of (22))};$$

the subscripts n and p refer respectively to electrons and holes; эфф- effective, пр - breakdown. Conclusions: The duration of the thermal breakdown

Card 2/3

The process of a ...

(Eqs. 36-41) and E_c decreases exponentially with rising temperature. For thin samples E_c is $\sim\exp(W/kT_o)$, for thick ones it is $\sim\exp(W/kT_o)$ if the drift rate and electron-hole recombination probability are not dependent on E, and $E_c \sim \exp(W/2kT_o)$ if $u_n \sim E$ and $u_p \sim E$ and β is not dependent on E. This is the case, e. g. at pn junctions of Si or Ge, if $h \sim E$; but E_c will be $\sim\exp(2W/3kT_o)$ if $h \sim E^{1/2}$. The time $t_{\pi i}$ required for a thermal breakdown to develop (Eq. 36) decreases with increasing E_c; that is, for thin samples by $\sim E_c^{-1}$, for thick ones by $\sim E_c^{-1}$, if u_n, u_p and β are not dependent on E, and by $\sim E_c^{-2}$ if u_n, $u_p \sim E$ and β is independent of E. $t_{\pi p}$ is inversely proportional to the voltage applied to the plate and independent of its thickness. In the case of electric breakdown (Eqs. 44, 46), E_c will depend on the pulse duration only if $(\beta+u/2h)t < 10$. E_c increases weakly with T, e.g. by a factor of 1.4 for a Ge pn junction when the temperature is raised from 120 to 340°K.

ASSOCIATION: Fizicheskiy institut im. P. N. Lebedeva AN SSSR, Moskva
(Physics Institute imeni P. N. Lebedev AS USSR, Moscow)

SUBMITTED: April 2, 1962 (initially), June 4, 1962 (after revision)

Card 3/3

CHUYENKOV, V.A.; CHEN' KE-MIN [Ch'ên K'o-ming]

Progress of breakdown in semiconductors with time.
Fiz. tver. tela 4 no.11:3054-3064 N '62. (MIRA 15:12)

1. Fizicheskiy institut imeni P.N. Lebedeva AN SSSR, Moskva.

(Breakdown, Electric)
(Semiconductors—Electric properties)

CHUYENKOV, V. A.

"The conductivity of a degenerated semiconductor in a strong electric field."

report submitted for Intl Conf on Physics of Semiconductors, Paris, 19-24 Jul 64.

L 6323-66 EWT(1)/ IJP(c)

ACCESSION NR: AP5019866 UR/0181/65/007/008/2469/2478

44,55

AUTHOR: Chuyenkov, V. A.

21,44,55

TITLE: Influence of mutual dragging of electrons and phonons on the electric conductivity of semimetals and degenerate semiconductors in a strong electric field

SOURCE: Fizika tverdogo tela, v. 7, no. 8, 1965, 2469-2478

TOPIC TAGS: phonon scattering, electric conductivity, kinetic equation, distribution function, electron scattering, Hall effect

ABSTRACT: By solving an appropriate system of stationary kinetic equations, the author determines the electron and phonon distribution functions in semimetals and degenerate semiconductors in a strong electric field (in the presence and in the absence of a magnetic field) for the case when the mutual dragging of the electrons and phonons is important. Unlike a similar treatment by L. E. Gurevich and I. Ya. Korenblit (ZhETF v. 44, 2150, 1963), the calculations pertain to the case when the distribution function of the phonon is such that the mutual dragging of the electrons and phonons is significant, and the electron drift velocity approaches the speed of sound. The system of kinetic equations for the electrons and phonons is derived and solved, and the electron temperature and conductivity are calculated

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L 6323-66

ACCESSION NR: AP5019866

6

on their basis. It is shown that: 1) In the absence of a magnetic field the density of the electric current tends to saturation if the phonons are scattered essentially by the electrons; scattering of the phonons by the defects or on the surface is negligible compared with phonon-phonon scattering, and the electron drift velocity approaches that of sound; 2) in a strong magnetic field, for the same relation between the different mechanisms of scattering of the phonons, the electric conductivity increases sharply if the Hall drift velocity of the drift is close to the velocity of sound. The conditions of applicability of the solutions are briefly discussed. "The author thanks V. N. Alyamovskiy for a discussion of the results." Orig. art. has: 53 formulas. 44,55

44,55

ASSOCIATION: Fizicheskiy institut im. P. N. Lebedeva AN SSSR, Moscow (Physics Institute AN SSSR)

SUBMITTED: 18Jan65 ENCL: 00 SUB CODE: NP

NR REF SOV: 003 OTHER: 000

nw

Card 2/2

MYSHKIN, K.I.; CHUYENKOV, V.F. (Saratov)

Changes in the blood serum calcium level in acute cranio[illegible]rebral injury. Vop. neirokhir. 27 no.4:26-28 Jl-Ag'63 (MIRA 17:2)

1. Kafedra gospital'noy khirurgii (zav. - dotsent G.N.Zakharova) meditsinskogo instituta.

9.4330

S/030/61/000/002/007/011
B105/B206

AUTHOR: Chuyenkov, V.I., Candidate of Physical and Mathematical Sciences

TITLE: Impact ionization and tunnel effect in semiconductors

PERIODICAL: Vestnik Akademii nauk SSSR, no. 2, 1961, 108 - 109

TEXT: The article describes the nature and mode of action of impact ionization and tunnel effect in semiconductors. The pervoye vsesoyuznoye soveshchaniye po udarnoy ionizatsii i tunnel'nomu effektu v poluprovodnikakh (First All-Union Conference on Impact Ionization and Tunnel Effect in Semiconductors) was convened by the Komissiya po poluprovodnikam (Commission for Semiconductors) at the Prezidium Akademii nauk SSSR (Presidium of the Academy of Sciences USSR) and Institut fiziki Akademii nauk Azerbaydzhanskoy SSR (Physics Institute of the Academy of Sciences Azerbaydzhanskaya SSR) in Baku from October 11 to 14, 1960. The Conference was attended by delegates from the Fizicheskiy institut im. P.N. Lebedeva (Physics Institute imeni P.N. Lebedev), Institut radiotekhniki i elektroniki (Institute of Radio Engineering and Electronics), Fiziko-tekhnicheskiy institut Aka-

Card 1/3

demii nauk SSSR (Physicotechnical Institute of the Academy of Sciences USSR) and delegates of other institutes. Impact ionization was first observed in gases, where it increases the concentration of free electrons. It further turned out that this phenomenon does not only occur in gases, but also in liquids and solids, specially in semiconductors. Investigation of the impact-ionization mechanism makes it possible to clarify the role of various factors influencing the discharge within semiconductors, and to choose semiconductors with the required properties. These problems were discussed in detail at the Conference. The second part of the Conference dealt with the tunnel effect in semiconductors. An isolated atom can be ionized directly in the outer electric field and, in contrast to impact ionization, without participation of a fast, free electron. This is possibly due to the tunnel effect. In semiconductors the tunnel effect proceeds in a complicated way, which leads to a current density increase, with the increase of the field potential. Under normal conditions the current density, because of the tunnel effect, increases at greater field-potential values than in impact ionization. In conclusion, it is stated that the problems discussed at the Conference are topical and of theoretical and practical significance. The activities of investigation impact ioniza-

tion and tunnel effect during the last years were discussed. It was stated that Soviet scientists are leading in elaborating the theory of impact ionization and tunnel effect in semiconductors, and in studying the electric breakdown of electron-hole transients and that at low temperatures. The Conference underlined the necessity of intensifying the theoretical and experimental investigation of impact ionization and tunnel effect in semiconductors by studying these phenomena under real conditions on semiconductors with different properties.

√B

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000309210004-2"

CHUYENKO, V.I. [Chuienko, V.I.]

Victory is attained in competition. Mekh. sil'. hosp. 12 no. 2:5-6 F '61. (MIRA 14:4)

1. Golova robitnichogo komitetu profspilki Frunzens'koi RTS. (Kherson Province--Repair and supply stations)

USSR / Forestry. Forest Management. K-4

Abs Jour: Ref Zhur-Biol., No 16, 1958, 72814.

Author : Chuyenkov, V. S.
Inst : Not given.
Title : On Features of the Growth and Structure of Larch Forests in the Yakutsk Leskhoz.

Orig Pub: Lesn. kh-vo, 1957, No 12, 21-23.

Abstract: No abstract.

Card 1/1

CHUYENKOV, V.S.; KOZLOV, A.I.

Economic factors and the prospects for the development of the production of ethyl alcohol from wood. Gidroliz.i lesokhim. prom. 12 no.6:1-4 '59. (MIRA 13:2)
(Ethyl alcohol) (Wood)

BASIN, Dmitriy Mikhaylovich; KOZLOV, Anatoliy Ivanovich; CHUYENKOV, V.S., red.; KHIVRICH, Ye.D., red.izd-va; PARAKHINA, N.L., tekhn.red.

[Problems of efficiency in the hydrolysis industry] Voprosy ekonomicheskoi effektivnosti gidroliznoi promyshlennosti. Moskva, Goslesbumizdat, 1960. 124 p. (MIRA 14:7)
(Hydrolysis)

CHUYENKOV, V. S., Cand Agr Sci, "Texture and commodity structure of larches of Amurskaya Oblast." Moscow, 1961. (Min of Higher and Sec Spec Ed RSFSR, Moscow Forestry Engineering Inst). (KL, 3-61, 227).

CHUYENKOV, V.S.

Hydrolysis and wood chemistry industry and the new period in the development of our country. Gidroliz. i lesokhim. prom. 14 no.7:1-3 '61. (MIRA 14:11)

1. Gosekonomsovet SSSR.
(Hydrolysis)
(Wood—Chemistry)

BASIN, Dmitriy Mikhaylovich; KOZLOV, Anatoliy Ivanovich; RAKUTS, Yevgeniy Petrovich; CHUYENOK, V.S., red.; ZLOTNIKOVA, Ye.A., red. izd-va; KARLOVA, G.L., tekhn. red.

[Economics of the utilization of spent sulfite liquor]Ekonomika pererabotki sul'fitnykh shchelokov. Moskva, Goslesbumizdat, 1962. 89 p. (MIRA 15:12)
(Sulfite liquor) (Woodpulp industry--By-products)

ANUCHIN, N.P.; SIRYENKOV, V.S., otv. red.

[Tables for determining standard logging units] Tablitsy dlia opredeleniia raschetnoi lesoseki. Moskva, Vses. nauchno-issl. in-t lesovodstva i mekhanizatsii lesnogo khoz., 1964. 55 p. (MIRA 17:11)

CHUYENKOVA, O. S.

CHUYENKOVA, O. S.- "Bird's Foot Trefoil-- a New Cultivated Food Source in the Southeastern USSR." Min of Higher Education USSR, Stalingrad Agricultural Inst, Stalingrad, 1955 (Dissertations for Degree of **Candidate of Agricultural Sciences**)

SO: Knizhnaya Letopis' No. 26, June 1955, Moscow

CHUYESHKO, K.

LAKHANIN, V., doktor tekhnicheskikh nauk; CHUYESHKO, K., inzhener.

Noted 19th century Russian specialist in marine steam engines, N.N.Bozherianov. Mor.i rech. flot 13 no.3:28-29 Jy '53. (MLRA 6:8)
(Bozherianov, Nikolai Nikolaevich, 1811-1876)

CHUYESHKO, K. Ye. Cand Tech Sci -- (diss) "Study of the ~~performance~~ working process of direct-action double steam pumps on the basis of the theory of [redacted] ~~similitude~~ dimensionality."
Odessa-Nikolayev, 1959. 16 pp (Min of Maritime Fleet. Odessa Inst of Engineers of Maritime Fleet), 150 copies (KL, 44-59, 127)

CHUYEV, Aleksey Vasil'yevich; CHERTETSOV, Vasiliy Nikolayevich; SOKHOR, Izabella Naumovna; BOBKOV, V.A., red.

[Work practice of the Leningrad Economic Region Council of Innovators] Opyt raboty sovetov novatorov Leningradskogo ekonomicheskogo raiona. Leningrad, 1965. 41 p. (MIRA 18:5)

LIVOV, G.S.; CHUYEV, I.N.

New standards for ultrasonic testing. Part 1. [illegible]
56 '65. (MIRA 23:6)

CHUYEV, M.N., student V kursa; ARZAMASTSEV, A.P., assistent

Colorimetric determination of quinine hydrochloride. Apt.delo 8 no.4:54-55 Jl-Ag '59. (MIRA 12:10)

1. Nauchnyy studencheskiy kruzhok kafedry farmatsevticheskoy khimii (zav. - prof.P.L.Senov) farmatsevticheskogo fakul'teta I Moskovskogo ordena Lenina meditsinskogo instituta imeni I.M.Sechenova.

(QUININE)

CHUYEV P.A.

USSR / Farm Animals. Small Horned Stock. Q-2

Abs Jour: Ref Zhur-Biol., No 23, 1958, 105699.

Author : Chuyev, P. A.
Inst : All-Union Scientific Research Institute of Sheep and Goat Breeding.
Title : Utilization of Corn Silage for Feeding Sheep.

Orig Pub: Byul. nauchno-tekhn. inform. Vses. n.-i. in-t ovtsovodstva i kozovodstva, 1956 (1957), No 3 (25), 146-153.

Abstract: At the kolkhoz "Rodina" in Novo-Aleksandrovskiy Rayon of Stavropol'skiy Kray, three groups of hybrid pregnant ewes were given during the winter of 1955-56 corn silage as follows (in % of total nutritiousness): first group 62.7, second group 47.3, third group 33.5. The fourth group was a control one and was not fed silage.

USSR / Farm Animals. Small Horned Stock. Q-2

Abs Jour: Ref Zhur-Biol., No 23, 1958, 105699.

Abstract: The live weight of ewes before lambing was identical and wool yield was according to groups (per head): 2.84, 2.79, 2.60 and 2.87 kg. The number of lambs brought forth per 100 ewes was: 117.6, 142.8, 126.6 and 116.5. Digestibility of rations was found comparatively equal for all the groups. -- F. M. Kazantsov.

Card 2/2

CHUYEV, S.A., uchitel' khimii

Work of young atheists. Khim. v shkole 16 no.1:48-50 Ja-F '60.
(MIRA 14:1)

1. Srednyaya shkola No.65, g.Rossosh'.
(Atheism)

CHUYEV, S.A., uchitel'

In culcating hygienic habits in students. Biol. v shkole no.2: 30-31 Mr-Ap '62. (MIRA 15:2)

1. Srednyaya shkola No.65 g. Rossosh' Voronezhskoy oblasti.
(Health education)

L 27247-66 EWP(k)/EWT(d)/EWT(m)/EWP(h)/T/EWP(l)/EWP(v)/EWP(t) IJP(c) JD
ACC NR: AP6009881 SOURCE CODE: UR/0413/66/000/004/0071/0072

AUTHORS: Lisin, V. Z.; Chuyev, V. G.; Popov, A. M.; Korobov, V. I. 33 B

ORG: none 18 39

TITLE: Device for induction annealing of copper wire. Class 40, No. 178996 [announced by Independent Construction Technology Bureau for Microconductors (Samostoyatel'noye konstruktorsko-tekhnologicheskoye byuro po mikroprovodam)] 7

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 4, 1966, 71-72

TOPIC TAGS: annealing, copper, wire

ABSTRACT: This Author Certificate presents a device for induction annealing 14 of copper wire, which consists of a transformer, contact rollers, a protective steam storage chamber, and a cooling chamber. To anneal bunches of copper wires in one transformer, the device has a system of lower and upper contact units consisting of two electrically insulated contact rollers (see Fig. 1). The protective steam storage chamber is in the form of a glass tube whose upper end has the form of a flange with a hole. The hole diameter is 2—3 times the annealed wire 2

Card 1/2 UDC: 621.365.51:621.785.3—426:669.3

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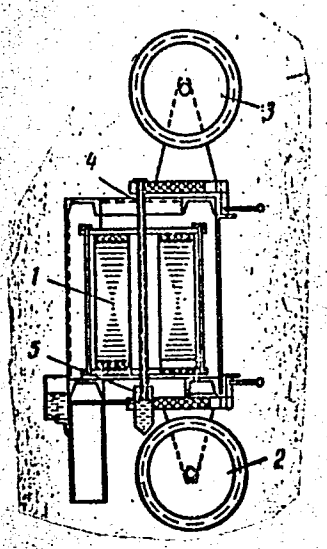
ACC NR: AP6009881

Fig. 1. 1 - transformer; 2 - lower contact rollers; 3 - upper contact rollers; 4 - protective steam storage chamber; 5 - cooling chamber.



diameter to decrease steam loss. Orig. art. has: 1 diagram.

SUB CODE: 11, 13/ SUBM DATE: 21Dec64

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[illegible] V. I.

USSR/Nuclear Physics - Tritum

Card 1/2 Pub. 146 - 2.34 FD-2337

Author : Vlasov, N. A.; Kaninin, S. P.; Ogloblin, A. A.; Samoylov, L. N.; Sidorov, V. A.; and Chuyev, V. I.

Title : Interaction of protons with tritium, and the excited state of helium-4

Periodical : Zhur. eksp. i teor. fiz. 28, 639-650, Jun 1955

Abstract : The authors describe experiments investigating the reactions T(pn) He^3 and T9pγ)He^4 in the interval of proton energies up to 7 Mev. The energy of the protons in the beam from the cyclotron chamber was varied by way of slowing in lead filters. Serving as detectors of the neutrons were so-called all-wave counter and uranium chamber; a scientilla ational counter served as detector of the gamma rays, with NaI(Tl). The curve of cross-section, sigma, versus proton energy, E_p, for the first reaction possesses a maximun at E_p=3 Mev. For the second reaction the cross-section increases monotonically in the entire energy interval. Also investigated were the angular distributions of neutrons and hamma raus. The characteristics of the excited state of helium-4 are discussed. The authors thank the associates of the Cyclotron Laboratory, and also Ya. A. Smorodinskiy, A. I. Bas', and Yu. M. Popov. Foruteen references,

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including 2 USSR (B. V. Rybakov, same issue, p. 651; A. I. Baz' and Ya. A. Smorodinskiy, ibid. 27, 382, 1954). FD-2337

Institution : Academy of Sciences USSR

Submitted : March 9, 1955.

S/030/60/000/010/012/018
B021/B058

AUTHORS: Baz', A. I. and Chuyev, V. I.

TITLE: Nuclear Reactions at Low and Medium Energies

PERIODICAL: Vestnik Akademii nauk SSSR, 1960, No. 10, pp. 106 - 108

TEXT: The Second All-Union Conference on these reactions was held in Moscow from July 21 to 28, 1960. It was attended by 600 Soviet and 50 foreign scientists. The Conference program included practically all essential parts of nuclear physics, except α- and β-radioactivity and fission. N. A. Vlasov gave a survey of experimental studies dealing with the investigation of low nucleonic systems. Ya. B. Zel'dovich, V. I. Gol'danskiy, and Ya. A. Smorodinskiy took part in the discussion on the problem of the possible existence of superheavy isotopes of the lightest nuclei and the ways for their discovery. A. I. Baz' reported on the surface structure of light nuclei. The following lectures were held next: I. S. Shapiro, on the possibility of obtaining extensive information about the structure of light nuclei

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on the basis of investigations of the μ-meson capture by nuclei; A. A. Ogloblin gave a survey of experimental studies and V. G. Neudachin of theoretical problems concerning direct nuclear reactions; A. P. Klyucharev reported on studies concerning the elastic proton scattering on nuclei conducted in laboratories of the Ukraine; V. I. Strizhak, on the results of the experimental study of elastic neutron scattering on nuclei; P. E. Nemirovskiy, on the present state of the optical model; I. Kh. Lemberg (USSR) gave a survey of papers on the Coulomb excitation; A. S. Kompaneyets reported on theoretical problems connected with the conditions of diatomic molecules; F. L. Shapiro, on the classical theory of the Mössbauer effect and experimental studies conducted in this direction in the USSR. L. Ye. Lazareva underlined the fact that at present the study of the energy dependence of the absorption cross section of photons by nuclei is emphasized. Interesting results in this field were achieved by a group of scientists of the Fizicheskiy institut im. P. N. Lebedeva (Institute of Physics imeni P. N. Lebedev) and the Institut teoreticheskoy i eksperimental'noy fiziki Akademii nauk SSSR (Institute of Theoretical and Experimental Physics of the Academy of

Sciences USSR). A. M. Baldin reported on theoretical problems of the interaction of photons with the nuclei; L. V. Groshev, on general regularities of γ-ray spectra, accompanying the thermal neutron capture by the nuclei; S. L. Tsytko, on the study of the radiative capture of the protons; V. V. Balashov and A. S. Davydov discussed various models of nuclei; Yu. T. Grin' gave a survey on Soviet studies in this direction. The results of nuclear physics during the last years, summarized by the Conference, facilitate the planning of further research.

OGLOBLIN, A.A.; CHUYEV, V.I.

Second All-Union Congress on Nuclear Reactions at Small and Medium Energies. Atom. energ. 9 no.6:509-511 D '60. (MIRA 13:12)
(Nuclear reactions—Congresses)

VLASOV, N.A.; KALININ, S.P.; OGLOBLIN, A.A.; CHUYEV, V.I.

(d, t)-Reaction on medium and heavy nuclei. Zhur. eksp. i teor. fiz. 38 no.1:280-282 Jan '60. (MIRA 14:9)
(Nuclear reactions) (Tritons (Tritium ions))

86925

S/056/60/039/005/042/051
B006/B077

24.6600

AUTHORS: Vlasov, N. A., Kalinin, S. P., Ogloblin, A. A., Chuyev, V. I.

TITLE: The (α,t) Reaction With Li^7, Be^9, and Na^{23}

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, 1960, Vol. 39, No. 5(11), pp. 1468 - 1470

TEXT: The authors report on experimental investigations of the (α,t) reaction with Li^7, Be^9, and Na^{23} with an α energy of 40 Mev in a wide excitation energy range. The final nuclei Be^8, B^{10} and Mg^{24} were also obtained through (d,n) stripping reactions and (d,t) adhesion reactions. The triton spectra, like in investigations of the (d,t) reaction, were determined from the tritium activity which had accumulated on the foils arranged around the target. Foils of the investigated element of 4 mg/cm^2 thickness served as targets. The results of these experiments are only illustrated in diagrams. Fig. 1 shows the angular triton distribution;

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The (α,t) Reaction With Li^7, Be^9, and Na^{23}

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E^* denotes the level of the final nucleus; the curve shows the calculated square of the spheric Bessel function for given l- and R_o-values. Fig. 2 shows the triton spectra recorded under small angles. In all three cases lines can be observed that correspond to several states of the final nucleus. The angular distribution of most groups can be well described by the squared spherical Bessel function $\left[j_{l+1/2}(qR_o)\right]^2$. Fig. 3 represents a comparison of the level excitation probabilities of the Be^8, B^{10}, and Mg^{24} nuclei in (d,n), (α,t), and (d,t) reactions. The maximum differential cross sections for the (α,t) and the $Na^{23}(d,n)Mg^{24}$ reactions and the reduced widths for the (d,t) and the $Be^9(d,n)B^{10}$ reactions are used for ordinates. There are 3 figures and 10 references: 3 Soviet, 2 British, and 5 US.

SUBMITTED: July 23, 1960

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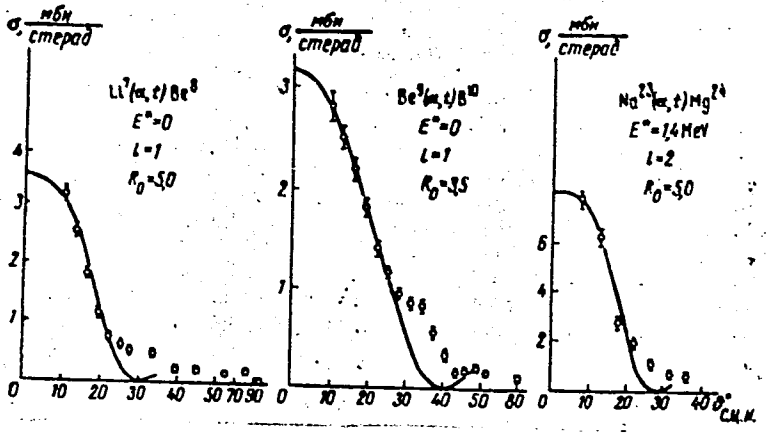

Fig.1

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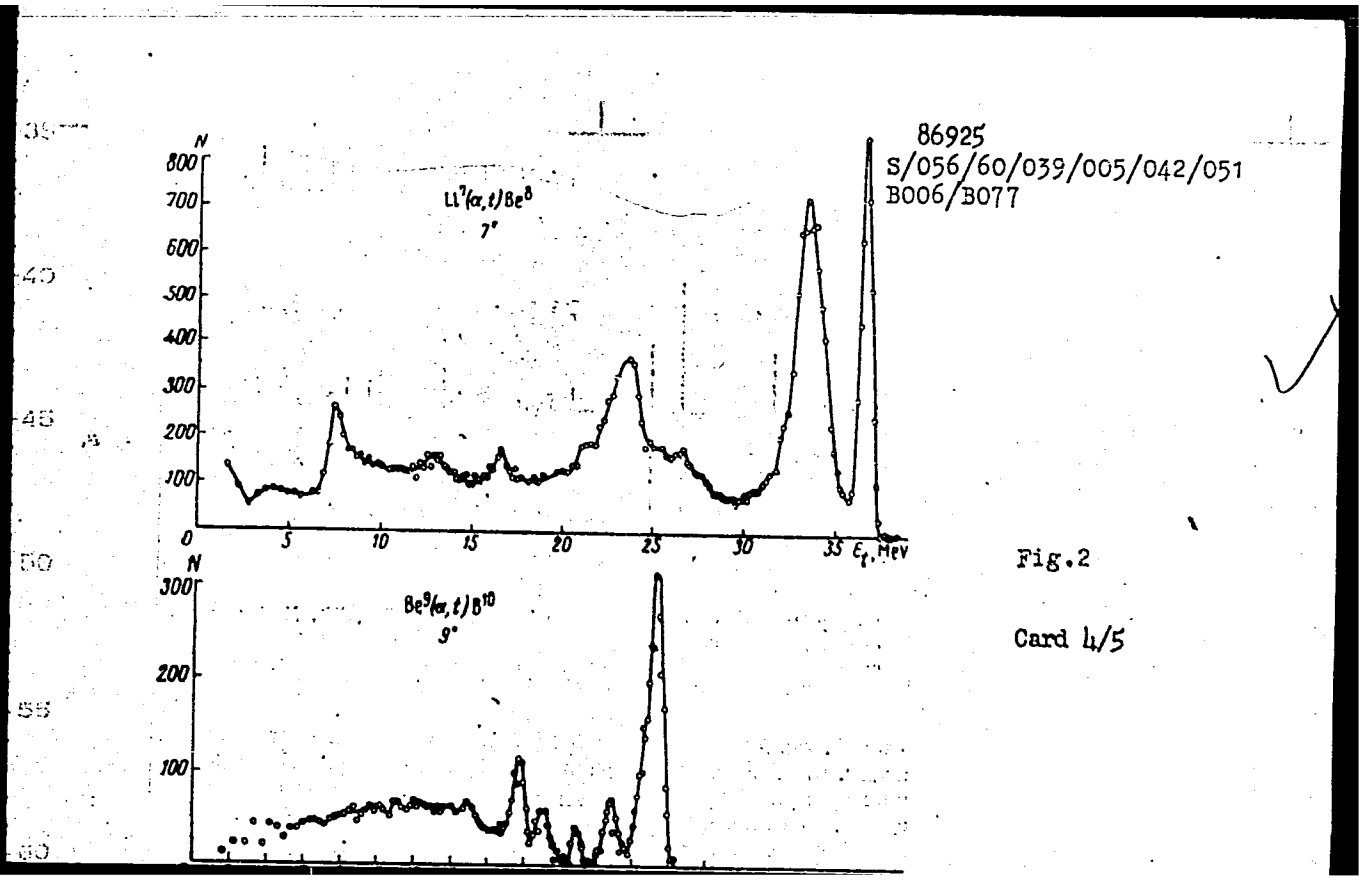

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Fig.2

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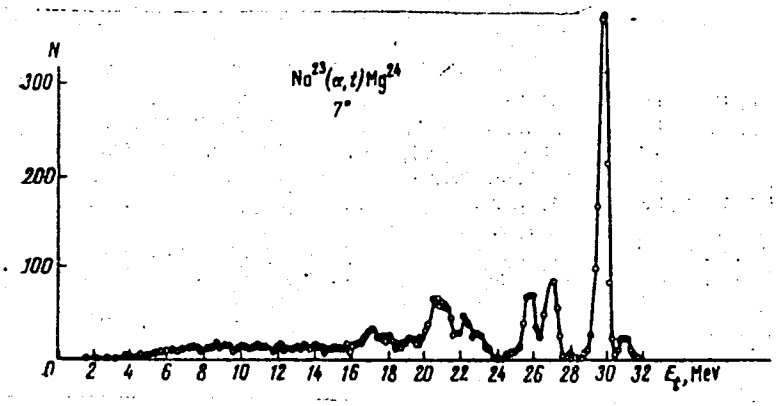

Fig.2

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B006/B056

26.2220

AUTHORS: Vlasov, N. A., Kalinin, S. P., Ogloblin, A. A., Chuyev, V. I.

TITLE: The (d,t) Reaction on Zirconium Isotopes

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, 1960, Vol. 39, No. 6(12), pp. 1615 - 1617

TEXT: In order to study the effect produced by external neutrons, the authors investigated the (d,t) reactions on $Zr^{91,92,94}$, which have 1, 2, and 4 neutrons above the closed shell with N = 50. The triton spectra were, like in earlier papers (Refs.1-3) determined according to the β-activity of tritium. The tritons emitted from a target of 3-5 mg/cm^2 were caught in piles of aluminum foils arranged under different angles at a distance of 15 cm from the target. The deuterons were accelerated in the cyclotron to 20 Mev. The targets were made from zirconium oxide, enriched in Zr^{91} to 79.5%, in Zr^{92} to 88.6%, and in Zr^{94} to 90.0%, respectively. All three isotopes displayed the existence of two state groups - the first

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The (d,t) Reaction on Zirconium Isotopes

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corresponds to the ground state, the second to an excited state. The angular distributions of these groups are shown in Fig.2 (upper row: ground state). To the ground-state group there corresponds an l = 2; i.e. to a $d_{5/2}$ state, the excited group l = 1 and 4 (width ~2 Mev). One of the groups corresponds to an ejection of neutrons from a closed shell with neutron binding energies, which are approximately equal and are about 11 - 13 Mev for all zirconium isotopes. In the Zr^{90}(d,t) reaction only this group is to be observed; its intensity decreases slowly from Zr^{90} to Zr^{94}. The other group corresponds to an ejection of an external neutron. The intensity of this group is almost proportional to the number of super-magic neutrons. There are 3 figures and 4 references: 3 Soviet and 1 US.

SUBMITTED: July 23, 1960

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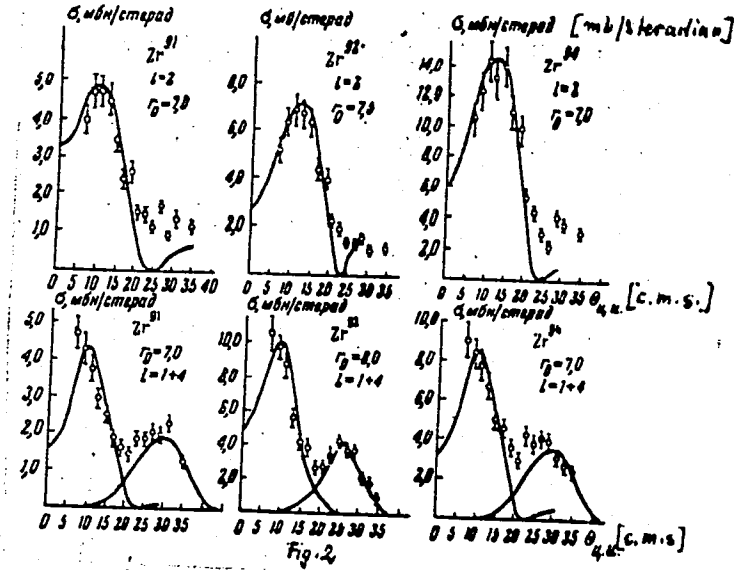

Fig. 2.

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26.2240

AUTHORS: Vlasov, N. A., Kalinin, S. P., Ogloblin, A. A., Chuyev, V.I.

TITLE: The Reaction $B^{11}(d,t)B^{10}$

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, 1960, Vol. 39, No. 6(12), pp. 1618 - 1620

TEXT: The $B^{11}(d,t)B^{10}$ reaction was investigated at deuteron energies of 20 Mev; as was the case also in earlier papers (Refs.1-4), the triton spectra according to the β-activity of tritium were accumulated in foil piles around the target (3 mg/cm^2 boron enriched in B^{11} to 81%, upon a 0.4 mg/cm^2 thick Mg backing). Fig.1 shows the triton spectrum recorded at 11°, B^{10} being produced in the ground and (known) excited states of 0.72, 1.74, 2.15, 3.58, 5.1, and 6.2 Mev. Numerical results of the measurements are tabulated. Also the distribution of the reduced widths θ^2 of the various levels of (d,t) and (d,n) reactions were investigated. The investigations indicated that excitation of the lower levels of B^{10} occurs

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The Reaction $B^{11}(d,t)B^{10}$

as a result of the ejection of a neutron with l = 1; the probability for the production of B^{10} in the ground state is several times higher than that for its production in excited states. There are 2 figures, 1 table, and 6 references: 4 Soviet, 1 US, and 1 Dutch.

SUBMITTED: July 23, 1959

Text to the table: 1) B^{10} level, Mev; 2) σ_{max} in the c.m.s., mb/steradian; 3) ground state; 4) isotropic.

Уровень B^{10}, Мэв 1	$B^{11}(d,t)B^{10}$				$B_{nat}(d,\alpha)B^{10}$	
	l	r_0, ф	σ_{max} в с. ц. м. 2 мб/стерад	Θ^4, %	l	Θ^4
3 Основное состояние	1	6,0	6,4 (15°)	2,47	1	1,7
0,72	1	6,0	1,75(15°)	0,71	1	3,5
1,74	1	7,0	0,95(15°)	0,39	1	2,5
2,15	1	6,0	1,55(15°)	0,72		
3,58	(1)		0,45(15°)	~0,1	1	0,7
4,77			<0,2 (15°)	<0,1(l=1)	(1)	0,3
5,11	} (1)					
5,16			0,9 (10—15°)	~0,3	(0)	1,3
5,93					(1)	(0,5)
6,2	изотропно 4		0,6		(1)	0,5

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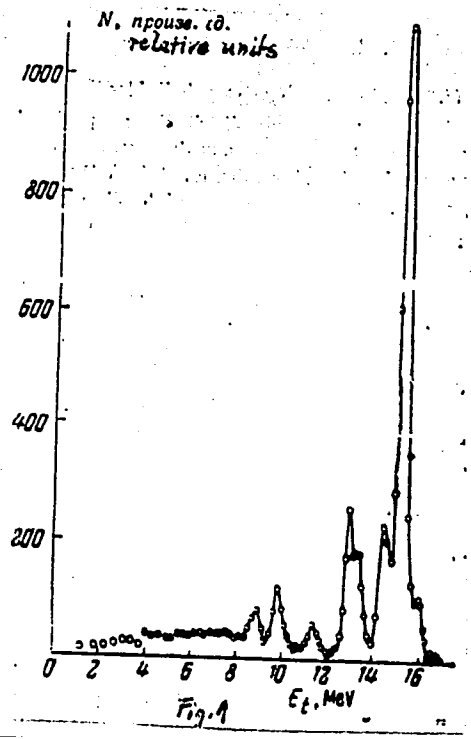

Fig. 1

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24,6200

AUTHORS: Vlasov, N. A., Kalinin, S. P., Ogloblin, A. A., Chuyev, V. I.

TITLE: (d,t) reaction on C^{12}, F^{19}, and Al^{27} nuclei

SOURCE: Tashkentskaya konferentsiya po mirnomy ispol'zovaniyu atomnoy energii. Tashkent, 1959. Trudy. v. 1. Tashkent, 1961, 79-84

TEXT: The present investigations continue previous studies (ZhETF 1959, 27, 54) which had shown that in (d,t) reactions on $Li^{6,7}$ and Be^{9} the excitation probability decreases rapidly with increasing level energy of the terminal nucleus. The excitation spectrum is here much more complicated than where only hole levels are excited, as neutrons may not only be extracted from outer (2s and 1d), but also from full 1p, shells. The triton spectra were obtained from the β activity of the resulting tritium collected in Al foils. It was eliminated from the plates by heating and conducted into a helium counter. $F^{19}(d,t)F^{18}$ was investigated with a 0.4 mg/cm^2 thick MgF_2 target and an 8.2 mg/cm^2 thick Teflon (CF_2) target

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(d,t) reaction on C^{12}, F^{19}, ...

at E_d = 20 Mev, $Al^{27}(d,t)Al^{26}$ at E_d = 19 Mev and with a 2.15 mg/cm^2 thick Al target. The Teflon target was also used to study the $C^{12}(d,t)C^{11}$ reaction. The t-angular distributions were compared with results obtained from the Butler theory. The strongest triton group consists of two components (l=0 and l=1). The scheme produced for F^{18} level agrees with that of other authors. Fig. 6 shows the Al^{26} level scheme obtained by other authors together with transitions observed here. Tabulated results show that the (d,t) reactions on F^{19} and Al^{27}, like those on Li^7 and Be^9, have a probability of excitation of the final nuclear levels which decreases rapidly with increasing level energy. The reduced widths of the 3-4 Mev levels are 3-10 times smaller than those of the ground state. Those of 5-7 Mev have 20-30 times less probability of excitation than the ground level. The 3.3-Mev F^{18} level (l=1) has negative parity and comparatively high probability of excitation (width: 0.73%) since a neutron is torn out of the p shell. In Al^{27}, extraction of a neutron with l = 2 is much more probable than one with l = 0, i.e., the inner neutrons of Al^{27} are mainly in the d-state with a small admixture of s-state. r_o increases with level energy from $4.5 \cdot 10^{-13}$ cm (C^{12} ground state) to

(d,t) reaction on C^{12}, F^{19}, ...

$9 \cdot 10^{-13}$ cm (F^{18}, 5.9 Mev). The authors thank D. P. Grechukhin and V. G. Neudachin for a discussion, and the cyclotron team for the irradiations. There are 7 figures, 2 tables, and 15 references: 1 Soviet and 14 non-Soviet. The four most recent references to English-language publications read as follows: Kuchner J. A., Almqvist E., Bromley D. A. Phys. Rev. Lett., 1, 260, 1958. Kuchner J. A., Almqvist E., Bromley D. A. Bull. Am. Phys. Soc., II, 3, 27, 1958. Almqvist E., Bromley D. A., Kuchner J. A. Bull. Am. Phys. Soc., II, 3, 27, 1958. Bennet E. F. Bull. Am. Phys. Soc., II, 3, 26, 1958.

ASSOCIATION: Institut atomnoy energii AN SSSR (Institute of Atomic Energy AS USSR)

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X

OGLOBLIN, A.A.; CHUYEV, V.I.

Measuring triton spectra in nuclear reactions. Prib.i tekh.eksp. 6 no.5:37-41 S-O '61. (MIRA 14:10)
(Nuclear reactions)

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B029/B063

24 6600

AUTHORS: Vlasov, N. A., Kalinin, S. P., Ogloblin, A. A., Chuyev, V. I.

TITLE: (d,t) Reactions of O^{16}, O^{18}, Mg^{24}, Mg^{25}, and Mg^{26} nuclei

PERIODICAL: Izvestiya Akademii nauk SSSR. Seriya fizicheskaya, v. 25, no. 1, 1961, 115-120

TEXT: This is the continuation of previous papers (Refs. 1, 2, 3) on the (d,t) reaction. A study of the latter makes it possible to determine the degree of conservation of single-particle states in the inner, completely filled shells of nuclei. If these states are conserved, it is possible to determine the neutron binding energy in the shells or the neutron transition energy between them. The nuclei of O^{16}, O^{18}, Mg^{24}, Mg^{25}, and Mg^{26} have completely filled 1s and 2p shells and different numbers of neutrons in the outer shell $1d_{5/2}$-$2s_{1/2}$. Like in Refs. 1-3 and 7, the deuteron energy was found to be about 20 Mev, and the triton spectrum was determined from the activity of tritium. MgO^{18}(60% O^{18}), $Mg^{25}O$ (86% Mg^{25}),

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(d,t) Reactions of O^{16}, O^{18}, ...

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$Mg^{26}O$ (90.5% Mg^{26}), and a foil of natural magnesium served as targets. Fig. 1 shows typical spectra for each target. In addition to the tritons resulting from (d,t) reactions of O^{18} and magnesium isotopes, a large group of tritons was produced by (d,t) reactions of O^{16} at E_t = 10.5 Mev. In the reaction O^{18} (d,t)O^{17}, four groups of tritons are observed, which correspond to the ground state and to the three excited states of O^{17} having energies of 0.87, 3.06, and 5.3 Mev. Fig. 2 shows the angular distributions of the four groups, which agree with the angular momenta l = 2, 0, 1 and 1 of the neutron. There were intense transitions to the ground state (l = 2) and to the first excited state (l = 0). The configurations $(d_{5/2})^2$ and $(s_{1/2})^2$ in the nucleus of O^{18} are strongly intermixed, and there is only a slight admixture of the configuration $(d_{3/2})^2$. The probability ratio of the configurations $(d_{5/2})^2$, $(s_{1/2})^2$, and $(d_{3/2})^2$ in the ground state of O^{18} is $(d_{5/2})^2/(s_{1/2})^2 = 3.9 \pm 1.0$ and $(d_{5/2})^2/(d_{3/2})^2 > 10$. In the case of O^{18}, the weakest binding is that of

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the d-neutron, while in the case of F^{19}, it is that of the s-neutron. The 3.06-Mev and 5.3-Mev levels are excited by ejection of a p-neutron. It is noted that the 3.058-Mev level has a negative parity and a 1/2-spin. The 3.06-Mev and 5.38-Mev states are of the hole type. In this way, the authors were able to calculate the values of neutron binding energy in the O^{18} and F^{19} nuclei for different states. The ground state of Mg^{23} and a group of states are very likely to be excited in the reaction $Mg^{24}(d,t)Mg^{23}$ at an energy of about 2.5 Mev. The angular distribution of the first group (Fig. 3) is in good agreement with $l = 2$. The angular distribution of the second group may have different components corresponding to $l = 2$, $l = 1$, etc. In the case of Mg^{24}, the s- and d-shells are probably much less intermixed than in the case of O^{18} and F^{19}. The group of tritons appearing in the reaction $Mg^{25}(d,t)Mg^{24}$ corresponds to the formation of Mg^{24} in the ground state and in excited states having energies

of 1.37, 4.12, 4.23 (not resolved), 6.0, and 7.8 Mev. Five groups of tritons have been found in the reaction $Mg^{26}(d,t)Mg^{25}$. These groups correspond to the well-known levels of the Mg^{25} nucleus. The results obtained for the reaction $Mg^{26}(d,t)Mg^{25}$ can be explained by the shell model if the neutron in Mg^{26} is in the d-state, with a small admixture of the s-state. The principal results of the present work are illustrated in Table 3. The authors thank the co-workers of the cyclotron laboratory for irradiations; V. S. Zolotarev and his co-workers for the preparation of enriched Mg^{25} and Mg^{26} isotopes; and V. M. Strutinskiy and A. I. Baz' for a discussion. This is the reproduction of a lecture read at the Tenth All-Union Conference on Nuclear Spectroscopy, Moscow, January 19-27, 1960. There are 6 figures, 3 tables, and 11 references: 4 Soviet-bloc and 7 non-Soviet-bloc.

ASSOCIATION: Institut atomnoy energii im. I. V. Kurchatova
(Institute of Atomic Energy imeni I. V. Kurchatov)

(d,t) Reactions of O^{16}, O^{18}, ...
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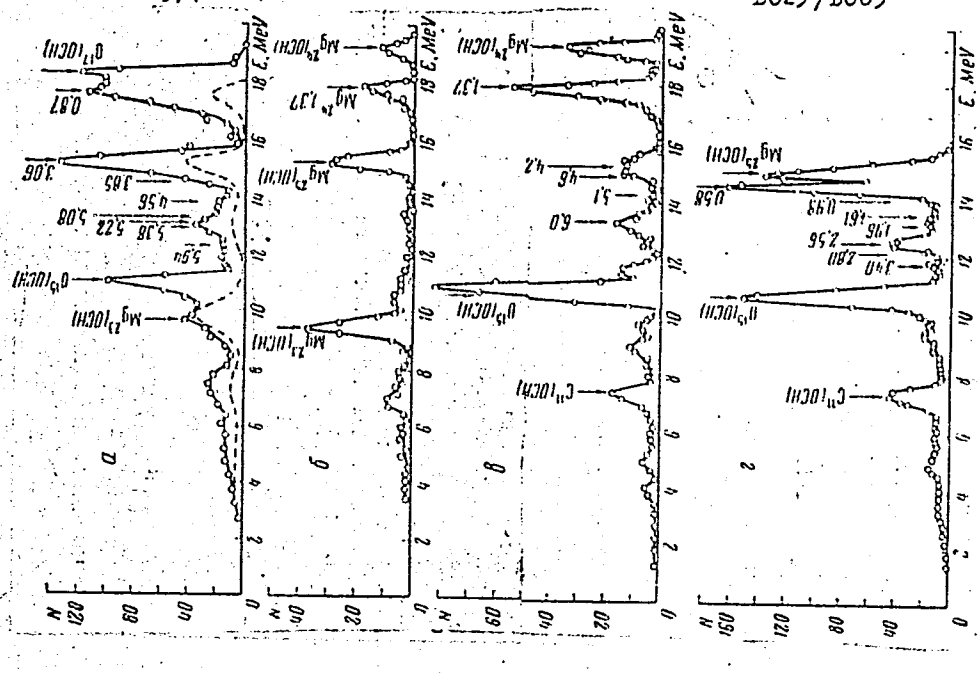

Рис. 1. Спектры тритонов для мишеней: а — MgO^{16}, $\theta = 9°$; б — Mg (естеств.), $\theta = 13°$; в — $Mg^{26}O$, $\theta = 11°$; г — $Mg^{25}O$, $\theta = 7°$

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(d,t) Reactions of O^{16}, O^{18}, ...

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Fig. 3

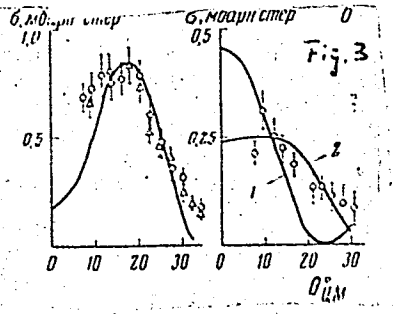

Fig. 3

Table 1: Neutron binding energies in O^{18} and F^{19}, Mev.

Nucleus	$d_{5/2}$	$s_{1/2}$	$p_{1/2}$	$p_{3/2}$
O^{18}	8.07	8.94	11.1	13.3
F^{19}	11.5	10.4	13.7	-

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(d,t) Reactions of O^{16}, O^{18}, ...

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Legend to Table 3:
1) residual nucleus;
2) energy of state (O_{CH} = ground state);
3) σ_{max} in mb/steradian, θ^{o} in the center-of-mass system

Остаточное ядро 1	Энергия состояния, MeV 2	$\sigma_{макс}$, мбарн/стер$^{-1}$ θ^{o} ц.-м. 3	l	$r_0 \cdot 10^{-13}$ см	θ^2,%
O^{15}	Осн.	3,2 (10°)	1	5,5	1,4
	5,2	0,15	—	—	—
O^{17}	Осн.	3,4 (15°)	2	6,5	1,75
	0,87	2,0 (10°)	0	6,5	1,3
	3,06	1,9 (10°)	1	7,0	0,55
	5,08	<0,3 (15°)	—	—	<0,15 l=2
	5,2	0,7 (10°)	1	6,5	0,3
Mg^{23}	Осн.	0,85 (18,5°)	2	7,0	0,81
	2,5	0,25 (12°)	2 (1)	7,0	0,3 (l=2)
Mg^{24}	Осн.	1,47 (8°)	2	7,0	0,74
	1,37	2,20 (14,5°)	2	7,0	1,27
	4,1+4,2	0,9 (17°)	2	7,0	0,71
	6,0	0,8 (14,5°)	2	7,0	0,51
	7,8	0,5 (17°)	—	—	—
Mg^{25}	Осн.	5,0 (17,5°)	2	6,5	3,30
	1,58	1,38 (10°)	0	7,0	0,29
	0,98	0,12	(2)	(7)	0,09
	1,96 (1,61)	0,4 (18°)	2	7,0	0,34
	2,56	0,45 (10°)	0	7,0	0,09
	2,80	0,3 (20°)	2	7,0	0,30
	3,40	0,3 (20°)	2	7,0	0,22

Card 7/7

FRANK, I.M., otv. red.; DAVYDOV, A.S., red.; LAZAREVA, L.Ye., red. NEMIROVSKIY, P.E., red.; CHUYEV, V.I., red.; POLYAKOVA, T.V., tekhn. red.

[Transactions of the Second All-Union Conference on Nuclear Reactions at Low and Medium Energies] Trudy Vtoroy Vsesoyuznoy konferentsii po iadernym reaktsiiam pri malykh i srednikh energiiakh, Moscow, 1960. Moskva, Izd-vo Akad. nauk SSSR, 1962. 658 p. (MIRA 16:2)

1. Vsesoyuznaya konferentsiya po yadernym reaktsiyam pri malykh i srednikh energiyakh, 2d, Moscow, 1960.
(Nuclear physics—Congresses)

BRILL, O. D.; CHUYEV, V. I.; OGLOBLIN, A. A.

"Investigation of some reactions corresponding to triangular graphs."

report submitted for Intl Conf on Low & Medium Energies Nuclear Physics, Paris, 2-8 Jul 64.

Kurchatov Inst, Moscow.

L 1851-66 EWT(m)/EWP(t)/EWP(b)/EWA(h) IJP(c) JD/JG

ACCESSION NR: AT5022308 UR/3136/65/000/836/0001/0016

41
41
B+1

AUTHOR: Orloblin, A.A.; Chuyev, V.I.

TITLE: The reactions Li super 7 (p,t) Li super 5 and Li super 6 (alpha,t) Be super 7

SOURCE: Moscow. Institut atomnoy energii. Doklady, IAE-836, 1965. Reaktsii $Li^7(p,t)Li^5$ i Li^6(alpha, t)Be^7, 1-16

TOPIC TAGS: nuclear reaction, lithium, beryllium, differential cross section, neutron, proton bombardment, alpha bombardment, neutron bombardment

ABSTRACT: The angular distributions and differential cross sections of the reaction $Li^7(p,t)Li^5$ at a proton energy of 16.6 MEV and of the reaction $Li^6(\alpha,t)Be^7$ at an α-particle energy of 40 MEV were measured. A comparison of the (p,t) reaction in Li^7 with (n,t) reactions in Li^6 and Li^7 indicates a mechanism in which a triton is knocked out in the interaction of protons and neutrons with Li^7. In the reaction $Li^6(\alpha,t)Be^7$, a level of Be^7 with an energy of 5.0 ± 0.3 MEV was observed. The excitation of such a state and also of the 4.53 MEV level occurs with approximately the same probability as that of the first two states of Be^7. In this respect, the (α,t) reaction in Li^6 differs markedly from the

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ACCESSION NR: AT5022308

(d,p) reaction. The results obtained are examined from the standpoint of the dispersion theory of direct processes: the data show that in the (n,t) and (γ,t) reactions in Li^7 an important part is played by "non-Butler" direct processes which can be compared with specific triangular diagrams of the dispersion theory. A qualitative interpretation of the experimental data within the framework of the dispersion theory involves certain difficulties. "The authors thank I. S. S. and co-workers for numerous comments." Orig. art. has: 6 figures.

ASSOCIATION: none

SUBMITTED: 00 ENCL: 00 SUB CODE: NP

NO REF SOV: 008 OTHER: 006

Card 2/2

OGLOBLIN, A.A.; CHUYEV, V.I.

The reactions Li^7 (p, t) Li^5 and Li^6 (α, t) Be^7. IAd. fiz. 2 no.4:670-676 O '65. (MIRA 18:11)

L 37683-66 EWT(d)/EWT(l)/T/FSS-2 IJP(c) GD

ACC NR: AT6022319 SOURCE CODE: UR/0000/66/000/000/0036/0041

AUTHOR: Chuyev, V. Ya.

30
B+1

ORG: none

TITLE: Obtaining color on a black-and-white kinescope

SOURCE: Vsesoyuznaya nauchnaya sessiya, posvyashchennaya Dnyu radio. 22d, 1966 Sektsiya televideniya. Moscow, 1966, 36-41

TOPIC TAGS: tv tube, picture tube, color tv

ABSTRACT: The Benham-Fechner effect of color perception from rapidly moving white, hatched, and black fields is reviewed. This effect was used (Elektron, no. 12, 1956) for tv transmission of simple static pictures, such as headpieces, ad elements, etc. Instead of moving a prepared film before a tv camera, the author proposed (Tekhnika kino i televid., no. 11, 1962) a circuit containing multivibrators which shaded or blackened areas on a tv picture tube in rapid succession, thus obtaining the same physiological false-color effect. Initial experiments with such a system are mentioned in the present short article; perception of 3 colors — blue, green, and red — is claimed. The author's method may find application in marking colored points on pictorial displays, etc. Orig. art. has: 3 figures. [03]

SUB CODE: 09 / SUBM DATE: 24Mar66 / ORIG REF: 007 / ATD PRESS: 5047

ns

Card 1/1

L 37682-66 EWT(d)/FSS-2 GD

ACC NR: AT6022320 SOURCE CODE: UR/0000/66/000/000/0041/0046

AUTHOR: Chuyev, V. Ya.

ORG: none

TITLE: Color range and color effect on a black-and-white kinescope

SOURCE: Vsesoyuznaya nauchnaya sessiya, posvyashchennaya Dnyu radio. 22d, 1966. Sektsiya televideniya. Moscow, 1966, 41-46

TOPIC TAGS: tv tube, picture tube, color tv / 43LK2B picture tube

ABSTRACT: The Benham(?)-Fechner effect (see AT6022319) is again mentioned. Recent Soviet publications on color perception and recognition are briefly reviewed. Purple-blue, greenish, and pink-red colors were obtained on the screen of a 43LK2B black-and-white picture tube. A chromaticity diagram for the Soviet-made "B-type kinescope" is constructed. Conclusions: (1) The color range perceived from a black-and-white secreen is apparently associated with the spectral distribution of radiation from the screen luminous surface; (2) The colors can be calculated if the luminous-surface spectrum is assumed to consist of three sources -- blue, red, green -- which are selected in accordance with the three principal excitation curves of the human eye. Orig. art. has: 2 figures and 6 formulas. [03]

SUB CODE: 17,09/ SUBM DATE: 24Mar66 / ORIG REF: 008 / OTH REF: 001

Card 1/1

CHUYEV, Yu.A. [deceased]

Use of xanthic acid in the dressing of molybdenum ores. Obog.rud 5 no.2:9-10 '60. (MIRA 14:8)
(Ore dressing--Equipment and supplies) (Molybdenum ores)

CHUYEV, Yuriy Vasil'yevich, inzh.-polkovnik; STERLIGOV, V.L., red.

[Winged rockets; aircraft-type missile] Krylatye rakety; samolety-snariady. Moskva, Voenizdat, 1964. 83 p.
(MIRA 17:9)

CHUYEV, Yu.V., doktor tekhn. nauk, prof.; MEL'NIKOV, P.M.; PETUKHOV, S.I.; STAPANOV, G.F.; SHOR, Ya.B.; KUZ'MIN, V.I.; BOGOLYUBSKIY, V.S.; IVANUSHKO, N.D., red.

[Principles of operations research in military technology] Osnovy issledovaniia operatsii v voennoi tekhnike. Moskva, Sovetskoe radio, 1965. 591 p. (MIRA 18:10)

KISELEV, Sergey Petrovich, inzh.-polkovnik; CHUYEV, Yuriy Vasil'yevich, inzh.-polkovnik; SOKOLOV, I.A., polkovnik, red.

[Dispersion of rockets] Rasseivanie raket. Moskva, Voenizdat, 1964. 85 p. (MIRA 17:5)

AT/L 27317-66

ACC NR: AM6003226 Monograph UR/

Chuyev, Yu. V.; Mel'nikov, P. N.; Petukhov, S. I.; Stepanov, G. F.; Shor, Ya. B. 34 B+1

Principles in the investigation of operations in military technics (Osnovy issledovaniya operatsiy v voyennoy tekhnike) Moscow, Izd-vo "Sovetskoye radio," 1965. 591 p. illus., biblio., index. 6000 copies printed.

TOPIC TAGS: operations research, military operation, military engineering, weapon test, antiaircraft defense system

PURPOSE AND COVERAGE: This book is intended for engineers engaged in military operations research. The reliability and efficiency of a variety of products of military technology are critically reviewed. Analytical methods used in evaluating these characteristics in diverse combat situations are presented. The book also contains information on the classical and the latest mathematical optimization methods used in solving military engineering problems. Special attention is given to statistical combat modeling using computers. The text is illustrated by numerous examples.

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ACC NR: AM6003226

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L 27317-66
ACC NR: AM6003226

SUB CODE: 15/ SUBM DATE: 18Sep65/ ORIG REF: 089/ OTH REF: 051

Card 3/3

CHUYEVA, A.N.

528 Kak my Uyrastki 800 tsentnerov kapusty i 450 tsentnerov ogurtsov s gektara. [Kolkhoz "Zolotoy Kolos" Kuyurgazin. rayona]. Ufa, Bashkir. Kn. Izd., 1954. 20 s. s portr. 20sm. 1.000 eks. 20k. - Na bashkir. yaz. -[54.50711] 635.34sr+635.63st] (47.83)

SO: Knizhnaya Letopis, Vol. 1, 1955

CHUYEVA, A. P.

23151 Novyy tip inzhenerno-geologicheskoy laboratorii. Trudy mosk. geol-razved. in-ta im. ordzhonikidze, T. XXIV, 1949, c. 83-89.

SO: LETOPIS' NO. 31, 1949

CHUYEVA, G. I.

USSR/Medicine- Virus Deseases Jan 53

"Distribution of the Virus of Lymphocytic Choriomeningitis Among Rodents, "M. I. Levi, N. N. B asova, G. I. Chuyeva, S. G. Abramova, Ukr Inst of Epidemiol and Microbiol imeni I. I. Mechnikov

"Zhur Mikrobiol, Epidemiol, i Immunobiol" No 1, pp 52-57

Rodents of various species, including 827 common mice and 33 wild rodents of various species, were caught in urban, suburban, and rural localities. Thirty four strains of the virus of lymphocytic choriomening itis were isolated from common mice, one from a field mouse. The degree of infection of rodents with the virus was hightest in rural, next hightest in suburban, and lowest in urban.

PA 241T15

CHUYEVA, G.I.

LEVI, M.I.; GUSEV, V.M.; KISLYAKOVA, L.N.; CHUYEVA, G.I.; KISELV, R.I.; DERKACH, V.S., professor, ispolnyayushchiy obyazannost' direktora; ABRAMOV, S.G., zavedmyushchiy.

Natural nidi of lymphocytic choriomeningitis. Zhur.mikrobiol.epid.i immun. no.8:76-81 Ag '53. (MLRA 6:11)

1. Khar'kovskiy institut epidemiologii im. I.I.Mechnikova (for Derkach).
2. Khar'kovskaya protivochumnaya stantsiya (for Abramov).
(Meningitis, Cerebrospinal)

CHUYEVA, G.I.

LEVI, M.I.; KISEL', R.I.; CHUYEVA, G.I.; KISLYAKOVA, L.N.

On the epidemiology of vesicular (pox-like) rickettsiosis.
Zhur.mikrobiol.epid.i immun. no.1:46 Ja '54. (MLRA 7:2)

1. Iz Khar'kovskogo instituta epidemiologii i mikrobiologii im. Mechnikova. (Rickettsia)

CHUYEVA, G.I.

Ecology of the shield byg (Eurygaster integriceps Put.) in forest shelterbelts. Uch.zap. KHGU 33:47-65 '50. (MIRA 11:11)

1. Otdel ekologii Nauchno-issledovatel'skogo instituta biologii Khar'kovskogo gosudarstvennogo universiteta (direktor - zasluzhennyy deyatel' nauki prof. A.V. Nagornyy, zaveduyushchiy otdelom prof. I.B. Volchanetskiy).
(Ol'ginka District--Eurygasters) (Windbreaks, shelterbelts, etc.)

RUDENKO, A.P.; BALANDIN, A.A.; CHUYEVA, G.Yu.

Factors causing a change in the mechanisms of carbon formation during the decomposition of hydrocarbons. Izv. AN SSSR. Otd. khim. nauk no. 1:164-166 Ja '61. (MIRA 14:2)

1. Moskovskiy gosudarstvennyy universitet im. M.V. Lomonosova.
(Hydrocarbons) (Carbon)

BATMANOVA, N.N.; PETROVA, Z.A.; KHOYNATSKAYA, N.S.; CHUYEVA, K.N.

Experience in the detection and treatment of the chronic forms of amebiasis. Sbor. nauch. rab. vrach. san.-kur. uchr. profsoiuzov no.1:144-146 '64. (MIRA 18:10)

1. Sanatoriy "Krasnyy shakhter", Kislovodsk.

ZERNOV, N.G., CHUYEVA, L.F.

Symptomatology of patent ductus arteriousus in children and changes following surgery [with summary in English]. Pediatriia 36 no.7:10-16 Je '58 (MIRA 11:7)

1. Iz Instituta gurdnoy khirurgii (dir. - deystvitel'nyy chlen AMN SSSR prof. A.N. Bakulev) AMN SSSR.
(DUCTUS ARTERIOSUS, PATENT, manifest. surgery preop. & postop. sympt. (Rus))

NOVIKOVA, Ye.Ch., kand.med.nauk (Moskva, nab.M.Gor'kogo, d.4/22, kor.A. kv.89); CHUYEVA, L.F., kand.med.nauk

Clinical and roentgenological diagnosis of congenital heart defects in children; Eisenmenger's complex. Vest. rent. i rad. 35 no. 6:16-22 N-D '60. (MIRA 14:2)

1. Iz Instituta pediatrii AMN SSSR (direktor - deystvitel'nyy chlen AMN SSSR prof. O.D. Sokolova-Ponomareva) i Instituta grudnoy khirurgii AMN SSSR (direktor - prof. S.A. Kolesnikov).
(HEART—ABNORMITIES AND DEFORMITIES)

MURAV'YEV, M.V.; ROMASHOV, F.N.; CHUYEVA, L.F.; SYUY LE-TYAN' [Hsü Lê-t'ien]

Treatment of 120 patients with patent ductus arteriosus. Grud. khir. 3 no.1:28-33 Ja-F '61. (MIRA 16:5)

1. Iz Instituta grudnoy khirurgii (dir. - prof.S.A.Kolesnikov, nauchnyy rukovoditel' - akademik A.N.Bakulev) AMN SSSR. Adres avtorov: Moskva, Leninskiy prospekt, 8. Institut grudnoy khirurgii AMN SSSR.

(DUCTUS ARTERIOSIS--LIGATURE)

MURAV'YEV, M.V.; CHUYEVA, L.F.; SYUY LE-TYAN' (Hsu-Le-t'ien]

Symptom of arterial pressure difference in the arms and legs of patients with patent ductus arteriosus. Kardiologiia 5 no.2:51-55 '63 (MIRA 17:2)

1. Iz Instituta serdechno-sosudistoy khirurgii (dir. - prof. S.A. Kolesnikov, nauchnyy rukovoditel' - akademika A.N. Bakulev) AMN SSSR.

DOMBROVSKAYA, Yu.F., prof.; ZHUKOVSKIY,M.A., starshiy nauchn.sotr.; KUTUSHEV, F.Kh., doktor med.nauk; LEBEDEV, D.D., prof.; MASLOV, M.S., prof.[deceased]; MISHURA,V.I., kand.med. nauk; OSINOVSKIY, N.I., prof.; SHAMSIYEV, S.Sh., prof.; ROGOV,A.A., red.; CHUYEVA, L.F., red.; BUL'DYAYEV, N.A., tekhn. red.

[Multivolume manual on pediatrics]Mnogotomnoe rukovodstvo po pediatrii. Moskva, Medgiz. Vol.3. 1962. 586 p. (MIRA 15:9)

1. Deystvitel'nyy chlen Akademii meditsinskikh nauk SSSR (for Dombrovskaya, Maslov).

(PEDIATRICS)

BURAKOVSKIY, V.I., kand.med.nauk; CHUYKVA, L.F.

Congenital heart failures and their surgical treatment.
Med. sestra 22.no.1:14-19 Ja '63. (MIRA 16:7)

1. Iz Instituta serdechno-sosudistoy khirurgii AMN SSSR, Moskva.
(HEART—SURGERY)